



Modeling, Analysis, Predictions, and Projections (MAPP) Program

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Modeling, Analysis, Predictions, and Projections Program

Contents

- MAPP Program context, objectives and implementation
- MAPP's funded climate model development research
- Questions for this workshop



Modeling, Analysis, Predictions, and Projections Program

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- MAPP Program is one of 4 CPO research programs contributing to NOAA's Climate Goal
- Builds upon the CPPA and CDEP (including CTB) predecessor programs
- MAPP contributes to USGCRP and WCRP



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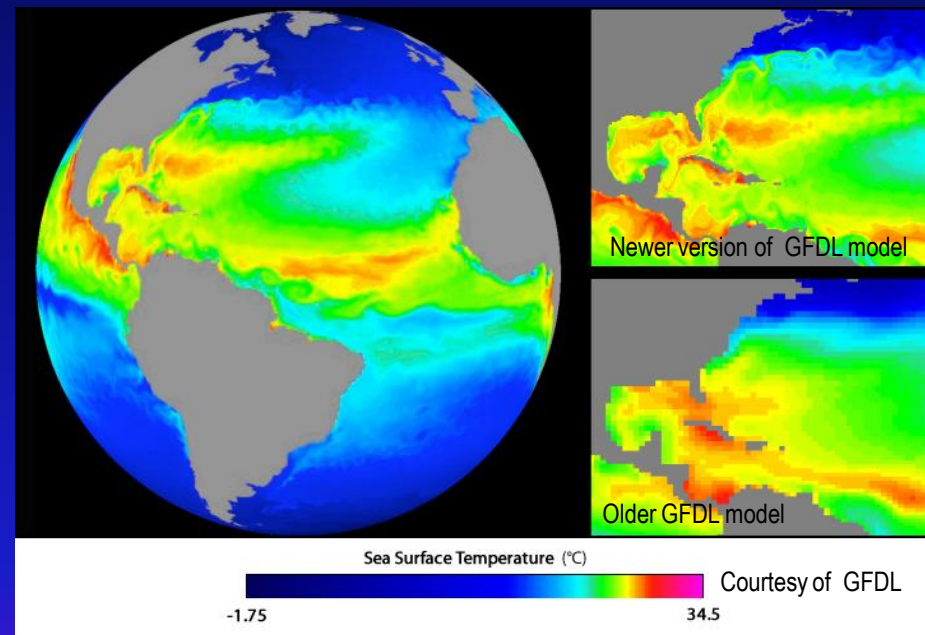
MAPP Program's Mission:

To enhance the Nation's capability to understand and predict natural variability and changes in Earth's climate system

MAPP supports development of advanced climate modeling technologies to improve simulation of climate variability, prediction of future climate variations from weeks to decades, and projection of long-term future climate conditions.

Primary objectives include:

1. Improvement of Earth system models
2. Developing an Integrated Earth system analysis capability
3. Improvement in methodologies for global to regional-scale analysis, predictions, and projections
4. Development of integrated assessment and prediction capabilities relevant to decision makers based on climate analyses, predictions, and projections





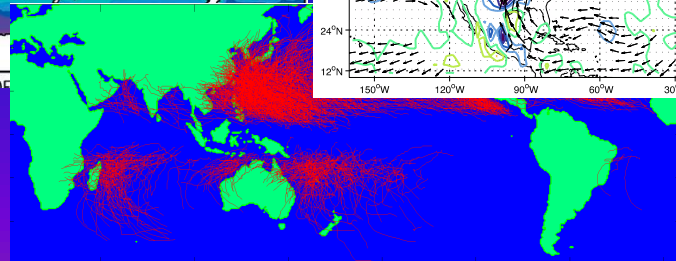
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MAPP Program Implementation

- Annual MAPP Program call for competitive research proposals
- In FY11 ~80% of MAPP's budget for competitive research, both
intra-mural and extramural
- Priorities in coordination with other CPO programs, in particular
the NIDIS program; NOAA labs ; other federal agencies as part of
USGCRP; the broader research community, as part of WCRP.
- Funding of NCEP-CTB activities and COLA with other agencies

FY11 MAPP Program Activities

Multi-model climate prediction

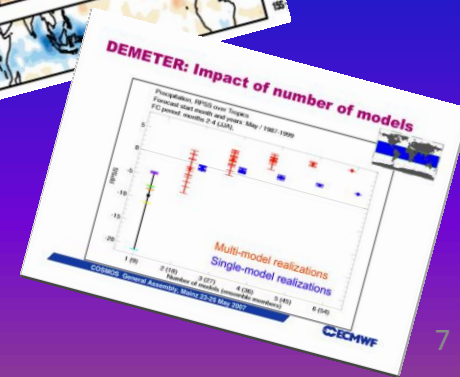
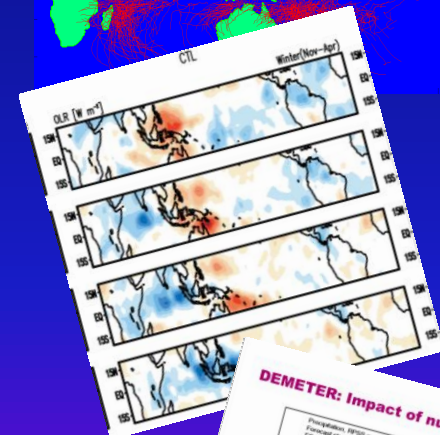
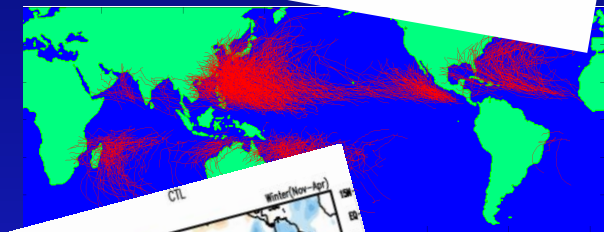
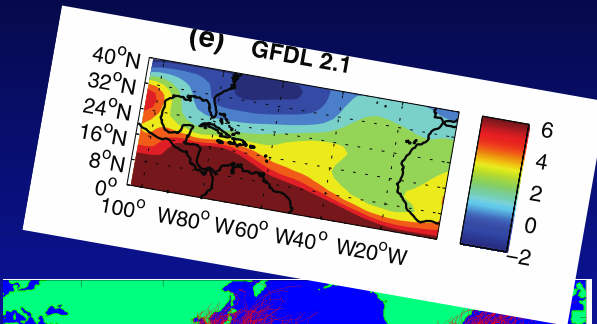




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Current MAPP Model Development Activities: General

- CMIP5 class-model evaluation (FY10/FY11)
- Global High-resolution studies (FY11 MAPP 1 call and COLA)
- Model biases in the tropical Atlantic warm pool/IAS (current call) and tropical Pacific (VOCALS)
- MJO/intra-seasonal variability modeling (FY10)

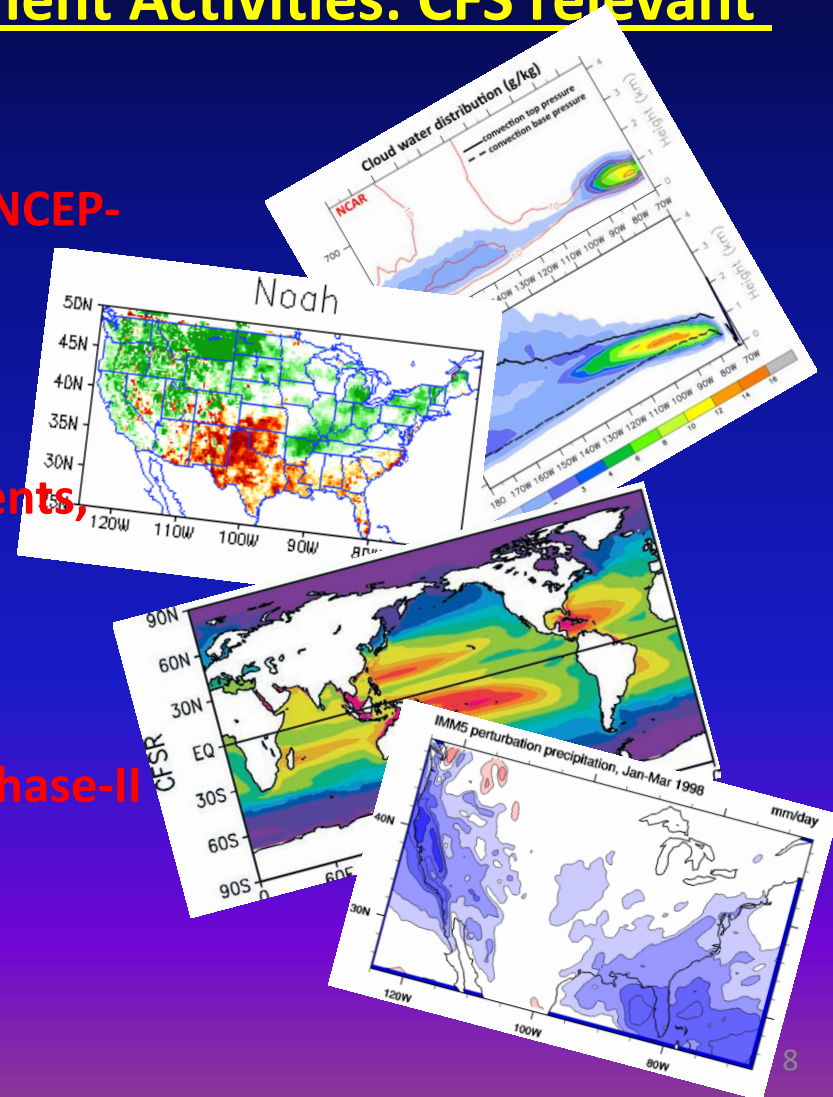




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Current MAPP Model Development Activities: CFS relevant

- Convection Climate Process Team (FY10, with NCEP-CTB)
- CFS (NOAH) Land Model/NLDAS Development
- CFS model evaluation and prediction experiments, including downscaling (COLA and MRED)
- CFS Re-analyses and Re-forecasts Project
- Experimental NMME system (FY11, phase-I; phase-II current call; with NCEP-CTB)





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MAPP's Programmatic Questions for this Workshop

Broader Context

- How does future CFS model development at NCEP connect with NOAA's modeling plans for analyses predictions and projections?
- What is NCEP's 5-10 year plan for CFS model development (high resolution versus model complexity, seamless versus multiple systems, HPC plans etc.)?
- How does CFS model development contribute to/leverage off model development efforts elsewhere?

Specific

- Has there been identifiable progress in CFS model performance (version 1 versus version 2) to justify further investment specifically in this system?
- What are the research areas that should be targeted first when attempting to develop a CFS next version?



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Thanks!

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